

Can we use scientific evidence
to create an infallible death
penalty system such that only
the guilty are executed?

DNA is the Perfect Science

HOUSTON POLICE DEPARTMENT LAB PROBE DETAILS MORE LAPSES

By STEVE MCVICKER and ROMA KHANNA
2006 Houston Chronicle
Jan. 5, 2006



During Sutton's trial,
DNA testimony suggested
that evidence from the
crime scene was an exact
match for Sutton's DNA.





Infallible science?

Timothy Dixon
Forensic Scientist

Illinois State Police Crime Lab

Gary Dotson was one of the first
DNA Exonerees

Misleading serology and hair
comparison testimony resulted
in his wrongful conviction.

Joyce Gilchrist
Forensic Chemist
Oklahoma City Police Lab

Gilchrist was fired in September 2001 for giving false and misleading testimony in 23 death sentence cases.

Eleven of those defendants have been executed.

Testimony in one case led to the wrongful conviction of a death-row inmate who was eventually freed.

David Harding
Supervisor
Troop C Forensic Unit
New York State Troopers

Admitting to planting fingerprint evidence in numerous cases to secure convictions when applying for a job with the CIA.

Dr. Brian W. Meehan
Laboratory Director
DNA Security, Inc.

Testified that he and District Attorney Mike Nifong colluded by agreeing not to report exculpatory DNA results.

The exculpatory evidence was intentionally withheld from the defense.

Fred Zain
Forensic Chemist
WV State Police Lab

Testified for the prosecution in 12 states

DNA exonerations and new evidence
demonstrated that Zain fabricated results, lied
on the stand and willfully omitted evidence
from his reports.

Is Maryland Immune?

Connie Bacasnot
Serologist
Baltimore County Crime
Laboratory

Balto. Co. reviews cases tied to
chemist; Former police
researcher criticized for
testimony against man later
freed

The Sun - Baltimore, Md.
Stephanie Hanes
March 12, 2003

"falls within the
definition of
material perjury"

Dr. Edward Blake
Forensic DNA Scientist
Forensic Science Associates

DNA is cloaked with an
aura of perfection and
invincibility

Md.-based DNA lab fires analyst over falsified tests

Ex-worker denies allegations; criminal cases are reviewed

BY LAURA CADIZ

SUN STAFF

ORIGINALLY PUBLISHED NOVEMBER 18, 2004

 Talk about it

 E-mail it

 Print it

Zealous Advocacy

Police expert lied about credentials

Ballistics specialist killed himself after being confronted with deceit

BY JENNIFER MCMENAMIN

SUN REPORTER

MARCH 9, 2007

A high-ranking police ballistics expert who testified in courts throughout Maryland and neighboring states killed himself after being confronted with evidence that he had lied about his credentials - a revelation that defense attorneys say could force new trials for some of the hundreds of people he helped convict.

UNIVERSITY OF MARYLAND-COLLEGE PARK, MD.

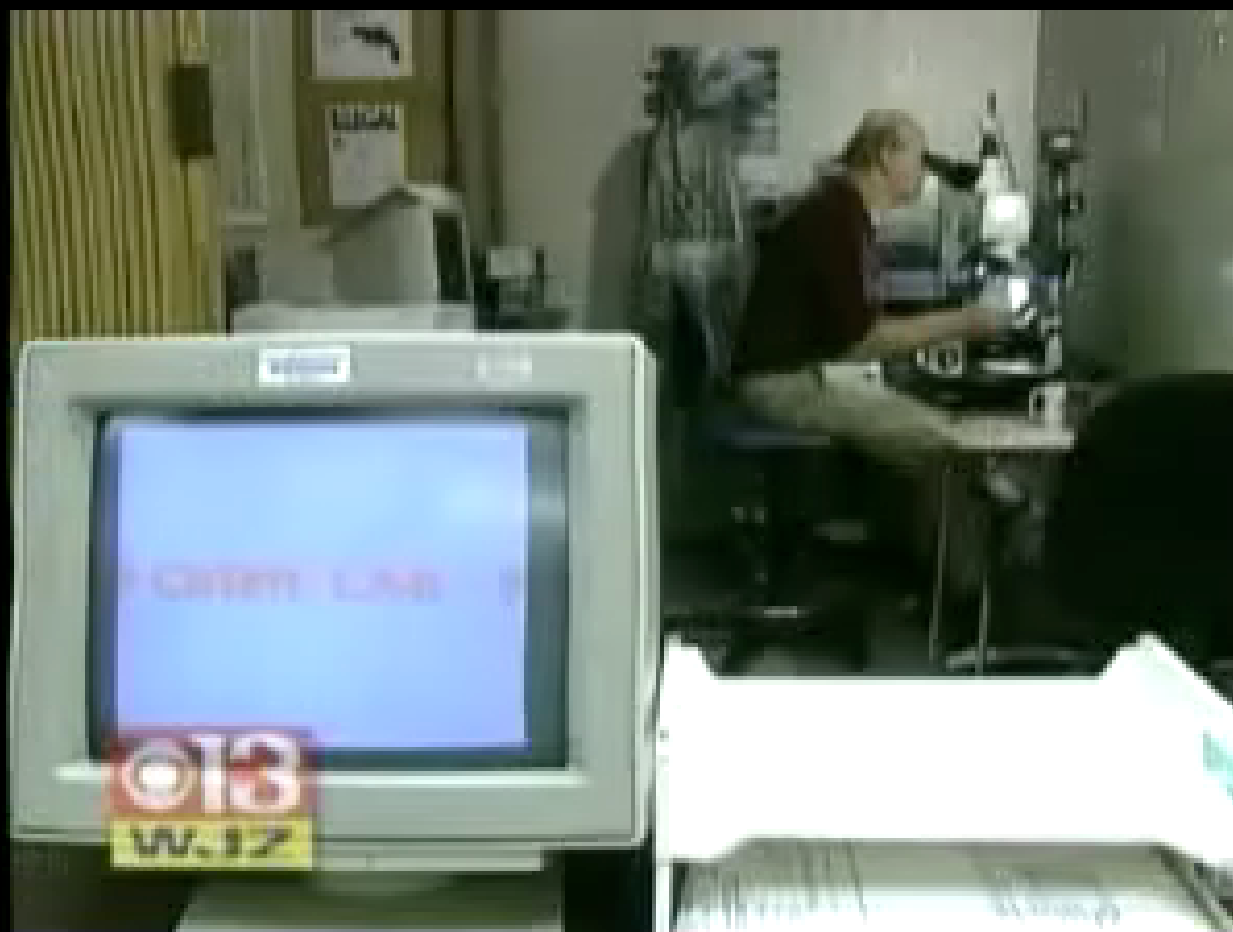
Student Name: **Kopera, Joseph** Birth Date: **8-13-45** Birth: **212-48-4692** Place: **Baltimore, Md.** Preparatory Credits From: **Univ. of Baltimore, 9-64 to 5-65**
Baltimore Jr. College, 9-65 to 5-66
 Entrance Status: **(Transfer Student)**
Univ. of Massachusetts, 2-67 to 2-70

Home Address: **1500 1/2 Elmtree Street, Baltimore 26, Maryland** Degrees **B.S.M.E.**
 Granted: **2-14-72**

DEPT. AND COURSE NUMBER	TITLE OF COURSE	Sem. Hours Att'd	Final Grade	Sem. Hours Earned	Qual. Pts.	DEPT. AND COURSE NUMBER	TITLE OF COURSE	Sem. Hours Att'd	Final Grade	Sem. Hours Earned	Qual. Pts.
Transfer Student from the University of Massachusetts 6-23-70 with 82 credits towards Bachelor of Science Degree.											
JUN 23 1970						SUMMER SEMESTER 71					
						MEEN 150	Energy Conversion	4	C	4	8
						MEEN 152	Machine Design	3	C	3	6
						MEEN 154	Engineering Experimentation	2	C	2	4
						MEEN 156	Mech Engr Anal Design	3	C	3	6
						MEEN 163	Fluid Mechanics II	3	C	3	6
						MEEN 165	Automatic Controls	3	C	3	6
SUMMER SEMESTER 70											
HIST 006	HIST. AMER CIVILIZATION	03	D	03	03.0	FALL SEMESTER 71					
ES 030	MATERIALS SCIENCE	03	DR	03	03.0	MEEN 140	ENGR ANAL COMPT PRG	03	C	03	06.0
MATH 064	DIFFERENTIAL EQUA ENGR	03	A	03	12.0	MEEN 161	ENERGY CONVERSION	03	C	03	06.0
MEEN 001	THERMODYNAMICS	03	DR	03	03.0	MEEN 165	ENGR EXPERIMENTATION	02	C	02	04.0
FALL SEMESTER 70						MEEN 157	MECH ENGR DES ANAL	04	C	04	08.0
ES 030	MATERIALS SCIENCE	03	C	03	06.0	HIST 101	HIST US TO 1865	03	C	03	06.0
ELEN 051	PRINC ELEC ENGR	04	C	04	08.0	BACHELOR OF SCIENCE DEGREE IN MECHANICAL ENGR.					
MEEN 102	FLUID MECHANICS	03	B	03	09.0	AWARDED 2-18-72					
MEEN 101	DYNAMICS OF MACHINERY	02	C	02	04.0	CURRICULUM: MECHANICAL					
MEEN 001	THERMODYNAMICS	03	B	03	09.0	APR 27 1972					
SPR. SEMESTER 71						DIRECTOR					
MEEN 104	GAS DYNAMICS	03	B	03	09.0	ADMISSIONS AND REGISTRATIONS					
MEEN 106	TRANSFER PROCESS	03	B	03	09.0						
MEEN 120	MEASUREMENTS LAB	02	B	02	06.0						
ELEN 052	PRIN ELEC ENGR	04	C	04	08.0						
MEEN 103	MATERIALS ENGR	03	B	03	09.0						

GRADING SYSTEM: A, B, C, D - Passing; F - Failure; I - Incomplete; S - Satisfactory; X - No record, off-campus course; W - Withdrew; WP - Withdrew pass; WNF - Withdrew failing; WN - Withdrew during first half of semester; R - Course repeated; NR - Not required for degree. At graduate level, D is failure.

Not just a question of
fabricating credentials



1. **GENERAL INFORMATION**
 2. **PROJECT DESCRIPTION**
 3. **PROJECT OBJECTIVES**
 4. **PROJECT SCOPE**
 5. **PROJECT RATIONALE**
 6. **PROJECT BENEFITS**
 7. **PROJECT RISKS**
 8. **PROJECT CHALLENGES**
 9. **PROJECT SUCCESS FACTORS**
 10. **PROJECT MONITORING AND EVALUATION**
 11. **PROJECT REPORTING**
 12. **PROJECT CLOSURE**
 13. **PROJECT ARCHIVE**
 14. **PROJECT LESSONS LEARNED**
 15. **PROJECT RECOMMENDATIONS**
 16. **PROJECT APPENDICES**
 17. **PROJECT REFERENCES**
 18. **PROJECT GLOSSARY**
 19. **PROJECT INDEX**
 20. **PROJECT COVER SHEET**

Science demands precision

If a laboratory cannot master the most basic quality control than what does that say about the integrity of that laboratory?

City crime lab director fired

Database update reveals employees' DNA tainted evidence, throwing lab's reliability into question

By Julie Bykowicz and Justin Fenton | Sun reporters

August 21, 2008

Several experts, including the director of the national crime lab accreditation board, said they were surprised that Baltimore had failed to take what they called the basic step of cataloging the employees' DNA.

"It's a uniformly standard practice of laboratories doing DNA testing," said Ralph Keaton, director of the American Society of Crime Laboratory Directors/Laboratory Accreditation Board. That board accredited Baltimore's lab in December 2006.

REPORT OF ANOMALOUS CONTROL SAMPLE

Date of control: 6.26.02

Type of control: (RB) Pos Ctl Neg Ctl

PCR system: Prof Plus (COFiler) PM/DQA1

Type of anomaly (attach copy of electropherogram or photo of strip):

Two peaks in green of RBDEZ in Cofiler

Source of anomaly (if able to determine):

Possibly analysts DNA

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None - contamination did not impact any of the associated samples. Also, amount of RB amplified was 10X or more the amount of associated sample amplified.

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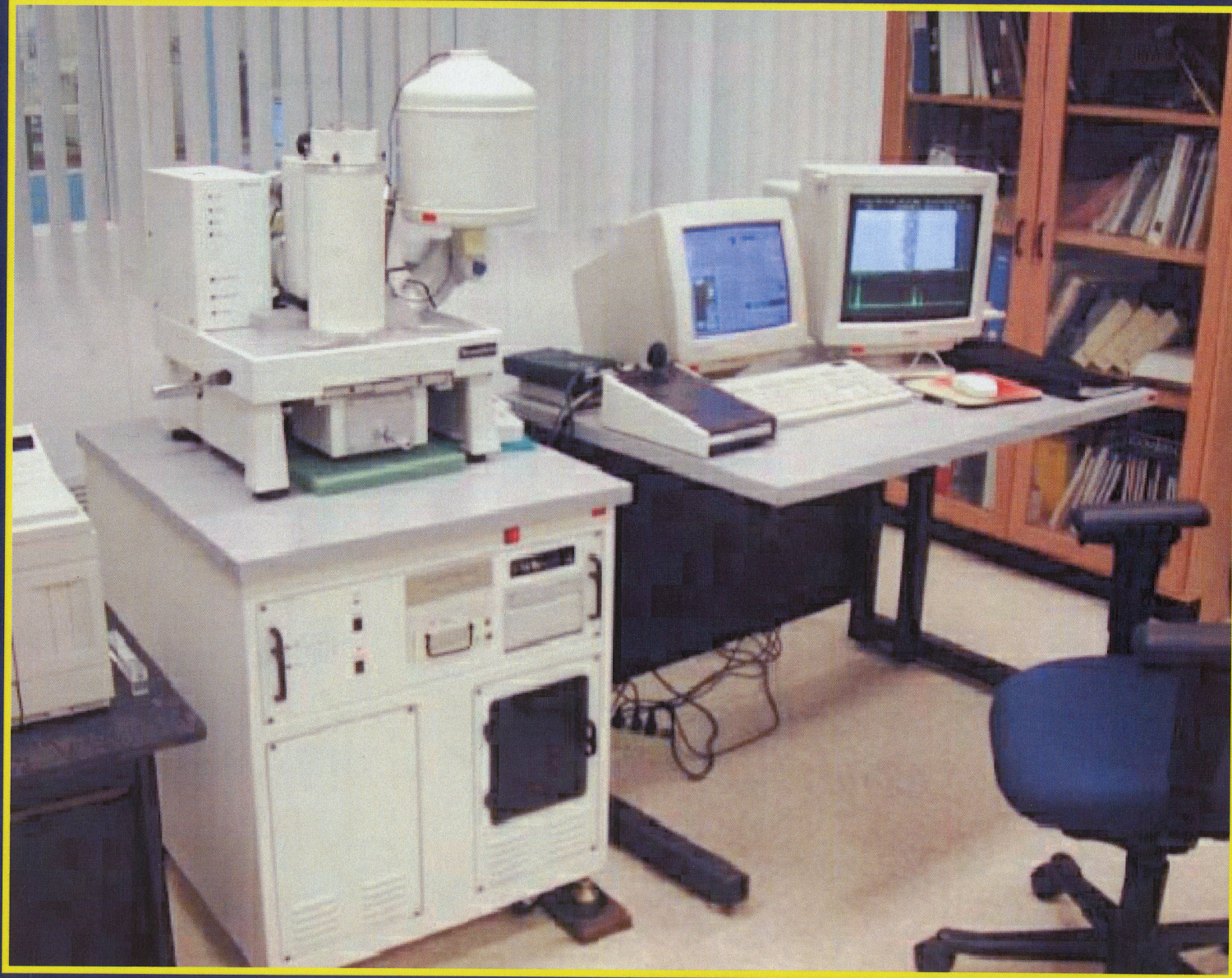
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Scanning Electron Microscope with Energy Dispersive X-Ray Analyzer (SEM/EDS)



PSEM 75 SEM

Bite Mark

FROM THE START, A FAULTY SCIENCE

Testimony on bite marks prone to error

By Flynn McRoberts and Steve Mills

Tribune staff reporters

October 19, 2004

Since that day in Chicago 34 years ago, bite-mark comparison has become a regular weapon in the forensic arsenal, with odontologists testifying in courtrooms hundreds of times.

Forensic odontology has come to represent a case study in how easily forensic science's false aura of infallibility can distort the adversarial system of American justice.

Dr. West, Forensic Dentist Mississippi

Due to improper presentation of bite mark evidence in several court cases, ethics complaints were lodged with three forensic organizations that Dr. West was a member of; the American Academy of Forensic Sciences, the American Board of Forensic Odontologists, and the International Association for Identification. His identification testimony resulted in numerous wrongful convictions.

Carlos A. Campos, "Defense Questions Bite-Mark Evidence For Murder Case," New Orleans Times-Picayune, Jan. 9, 1993

Steve Cannizaro, "Murder Witness' Fairness Questioned," New Orleans Times-Picayune, May 10, 1996

John Stossel, "Junk Science: What You Know That May Not Be So Scientific-Theories That May Be Wrong," ABC News, Aug. 28, 1997

Andrew Murr, "A Dentist Takes the Stand," Newsweek, Aug. 20, 2001

Sotos "Expert Witness to Face Malicious Prosecution Suit," Chi. Daily L. Bull. 6, Jan. 16, 2003.

Steven Kroft "Forensic evidence; skepticism surrounding Dr. Michael West's use of bite mark analysis in murder cases," 60 Minutes, Feb. 17, 2003

Hair Comparison

Melvin Hett
Former Criminalist,
Oklahoma State Bureau of Investigation

Misidentified hairs led to a wrongful conviction in a death penalty case. Lab notes indicated that another OSBI criminalist excluded the defendants. DNA tests cleared both men originally convicted.

Baldwin, D. "Experts Disagreed on Hair Analysis," Daily Oklahoman, May 27, 2001

Ron Williamson and Dennis Fritz - The Justice Project

Arson

DA wants death row inmate freed

Web Posted: 10/05/2004 12:00 AM CDT

Maro Robbins

San Antonio Express-News

More than 17 years after Ernest Willis went to death row for setting a house fire that consumed two sleeping women, West Texas prosecutors cited new suspects Monday.

That expert, Gerald L. Hurst, said the initial suspicions of arson rested on a flawed and now-outdated understanding of the physics of fire.

Death-row inmate freed after 17 years
Ernest Willis' conviction thrown out
By Michael Gracyzk
Dec. 6, 2004

HUNTSVILLE, TEXAS - With little more than the standard \$100 in his pocket, Ernest Willis walked out of prison a free man Wednesday after 17 years on death row for a crime that may have never even occurred.

But Ori White, Pecos County district attorney, dropped the murder case Tuesday, saying there were strong indications the fire was an accident.

Chicago Tribune

Fire that killed his 3 children could have been accidental

By Steve Mills and Maurice Possley; Chicago Tribune

December 9, 2004

CORSICANA, Texas -- Strapped to a gurney in Texas' death chamber earlier this year, just moments from his execution for setting a fire that killed his three daughters, Cameron Todd Willingham declared his innocence one last time.

"There's nothing to suggest to any reasonable arson investigator that this was an arson fire," said Hurst,

"It was just a fire."

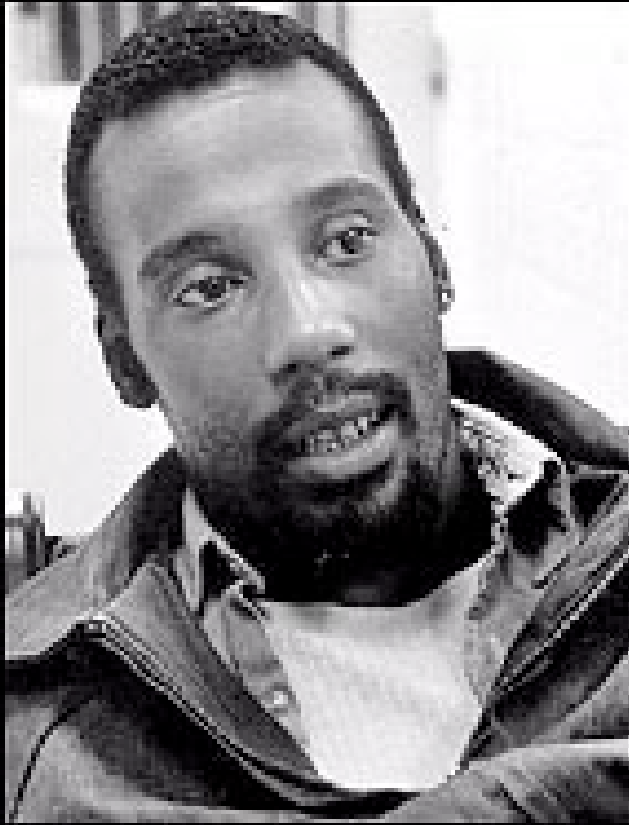
Comparative Bullet Lead Analysis

In 2004, however, the nation's most prestigious scientific body concluded that variations in the manufacturing process rendered the FBI's testimony about the science "unreliable and potentially misleading."

Specifically, the National Academy of Sciences said that decades of FBI statements to jurors linking a particular bullet to those found in a suspect's gun or cartridge box were so overstated that such testimony should be considered "misleading under federal rules of evidence."

A year later, the bureau abandoned the analysis.

Virginia Crime Laboratory



Earl Washington Jr.



Earl Washington Jr. came within nine days of being executed for a murder he did not commit. Washington spent nearly 18 years in prison, including nine on death row.

“Washington was freed in February, 2001, not because of the legal and judicial systems, but in spite of them.

In 1993, new DNA tests were performed on the blood and semen found on the victim, and the results did not match Earl Washington's DNA.

After 18 years in prison,
including nine and a half on
death row, Washington received
a pardon from Governor
Gilmore and was released on
February 12, 2001.

World Renown Laboratory

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